

Patent claims

1. A thin-walled rolling bearing, such as a needle bearing, produced without removal of material, the outer rings of which bearing are produced from a cold-rolled strip, characterized in that the outer rings are produced from a cold-formable, fully hardenable steel, a ratio of from 1:20 to 1:5 being set between their wall thickness and the diameter of the bearing needles, and the fully hardened wall having a core hardness of \geq 600 HV and a surface hardness of \geq 680 HV.

2. The rolling bearing as claimed in claim 1, characterized in that the core hardness is from 600-650 HV and the surface hardness is from 680-750 HV.

3. The rolling bearing as claimed in claim 1, characterized in that a heat-treatment steel with the following chemical composition is used:

0.37 - 0.50 % C	up to	0.50 % Cr
up to 0.40 % Si	up to	0.40 % Ni
0.50 - 0.80 % Mn	up to	0.10 % Mo
up to 0.020 % P	up to	0.20 % Cu
up to 0.020 % S		

4. A universal joint bush (8) for receiving a bearing pin which is mounted in rolling bearing form and is formed from a cold strip as a thin-walled needle bearing bush which is produced without the removal of material and the closed base of which is used for a universal joint pin to bear against at the end side, characterized in that it is produced from a cold-formable, fully hardenable steel, the fully hardened wall having a core hardness of \geq 600 HV and a surface hardness of \geq 680 HV.

5. The universal joint bush (8) as claimed in claim 4, characterized in that the core hardness is from 600 - 650 HV and the surface hardness is from 680 - 750 HV.

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6. The universal joint bush (8) as claimed in claim 4, characterized in that a heat-treatment steel with the following chemical composition is used:

10	0.37 - 0.50 % C	up to	0.50 % Cr
	up to 0.40 % Si	up to	0.40 % Ni
	0.50 - 0.80 % Mn	up to	0.10 % Mo
	up to 0.020 % P	up to	0.20 % Cu
	up to 0.020 % S		